

Sexuality and Hiv/Aids Profiles among Fisher Folk in Kainji Lake Basin

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Abstract

HIV/AIDS is spread through high risk behaviors, fishing communities are among the social groups that are most vulnerable to HIV/AIDS infection because of their lifestyle and the way they conduct their fishing activities. The objective is to examine sexual behavioral practices of fisher folk and HIV/AIDS vulnerability profile in the fisheries sector of Kainji Lake Basin. A two-stage random sampling procedure was used to select 400 respondents for this study. Kainji Lake Basin was stratified into eight strata based on Kainji Lake Management and Conservation Unit (KLMCU) classification. The data were subjected to descriptive, and Mann Whitney U. The findings revealed that only 28.3

Index terms— sex, condom, fisher folk, fishing communities, disease and hiv/aids.

1 Introduction

fisher folk in sub-Saharan Africa are highly vulnerable to HIV/AIDS. A combination of poor health and sanitation, high risk behavior, high mobility within generally isolated area and lack of services renders fisher folk increasingly vulnerable to HIV and other diseases (Allison & Seeley, 2004; Gordon, 2005; Kissing et al 2005). According to Arnett and Whiteside (1996) in United Kingdom among the gay male community, some sexual lifestyles were associated with high risks of contracting the common sexually transmitted diseases. Thus it was that economic, cultural and political elements contributed to the Development of a "risk environment", where certain behaviors became risk behaviors.

Studies in African countries show that young people often perceive their risk of HIV/AIDS to be low even if they engage in HIV/AIDS risk behaviors, live in areas with high HIV prevalence rates, or are It was observed that one explanation for low perceived HIV/AIDS risk is that youth may exhibit optimistic bias, tending to underestimate risks in general due to a feeling of invulnerability (Macintyre et al., 2004; Moore and Rosenthal, 1991). Eaton et al. (2003) noted that individuals who deny the presence of HIV/AIDS in their community have reduced perceived vulnerability to the disease.

Evidence of a relationship between knowing someone with HIV/AIDS and greater perceived risk of HIV/AIDS for people in Africa has, however, been mixed (Barden-O'Fallon et al., 2004; Macintyre et al., 2004; Smith and Morrison, 2006). In many less developed countries, the primary method of HIV/AIDS transmission is heterosexual intercourse (UNAIDS, 2006), and most African know that HIV/AIDS can be transmitted this way (Eaton and Flisher, 2000; Shisana et al., 2005). Some studies in sub-Saharan Africa have found correlations between perceived HIV/AIDS and risk behaviors (Barden-O' Fallon et al., 2004; Maharaj, 2006; Maswanya et al., 1999; Sarker et al., 2005; Shobo, 2007; Ukwuani et al., 2003), while others have not (Adetunji and Meekers, 2001).

It is against this background that the study was designed to examine the sexual behavior and HIV/AIDS profile among fisher folk in the Kainji Lake Basin.

2 II.

3 Methodology

Kainji Lake (the biggest manmade lake in Nigeria) was formed as a result of the impoundment of the river Niger by the construction of the Kainji dam at Kainji Island in 1968. Kainji Lake Basin comprises of Niger and Kebbi States with these neighbouring emirates Kontagora, Borgu and Yauri. The basin has 314 fishing communities. Although, there was no record of the total number of the fisher folk around the lake area; it was estimated by Vakily (1995) at 70,000 people living directly or indirect from the Kainji lake fisheries. The sampling procedure was in two stages. Kainji Lake Basin was stratified into to eight strata by Kainji Lake Management and Conservation Unit. The first stage was the selection of fishing communities considering the following criteria; location in the basin, scale of activities, proximity to services, diversity of fishing activities, composition of communities, landing sites and stable traditional institutions. The second stage of the sampling procedure consisted of selection of 10 respondents by simple random technique giving a total of four hundred (400) respondents. An Interviewer administered questionnaire was used to obtain information on sexual behaviors and HIV/AIDS profiles. Key informants were also used to obtain relevant information. The tools of analysis used include descriptive statistics such as frequency distribution, percentage, charts and mean. Inferential statistics such as Mann Whitney U analysis.

4 III.

5 Results and Discussions

Majority of the fisher folk (67.7%) were between 15 and 40 years. The fisher folk had an average age of 37 years, while those who were above 40 years made up 34.1%. The majority of the fisher folk fall within the age groups noted for high HIV prevalence in Nigeria. Correct information on HIV/AIDS is more likely to be obtained from these age groups which are the most sexually active and mostly affected by HIV/AIDS. This age group is the most crucial to agricultural development. This finding corroborates the report of NDHS ??2003).

Majority of the respondents (64.2%) are males; almost all of the fisher folk (88.1%) were also married with one or more wives. The rest were either single (11.3%) and divorced (0.3%) and widowed (0.3%). The findings revealed that at least, 50% of the respondents had more than one wife. Informal discussion with key informant revealed that some women may be in second or third marriage as found in the study area. The fluidity of relationship among men and women means that there is an indication of a tendency for sexual continuation, particularly among the married people. Polygamy is a show of wealth among the fisher folk. Table 2 presents the household size. About 48.5% had 1 -5 children and 15.0% had above 10 children. These large sizes may be difficult to maintain in view of poverty, types of accommodation not spacious and with little cross ventilation while those who did not specify number of children may be due to their belief. The household size may constitute a veritable source of labor in the study area. Table 3 shows the ethnic composition of the respondents. 50% were Hausa, 0.8% was Urhobo/I jaw, and 3.8% were Yoruba. The fishing communities composed of diverse ethnic composition. This result is agreed with Oyedipe (1977) on the ethnic composition identified living around the Kainji. The various ethnic groups except the Urhobo/Ijaw and Yoruba are more or less permanent features and contributed to the economy in the study area. A range of languages were spoken in the area. This suggests that HIV/AIDS interventions should take language for communication into account.

Majority (95.5%) of the respondents were Muslims. This religion allows polygamy. Only 4% of the respondents were Christians. This finding revealed that men could have more than one wife; it is more acceptable for them to have multiple relationships than for women. Pie chart below presents the education qualification of the respondents. 3.5% of the respondents have tertiary education while about 71% had no western education. The level of western education among the respondents is very low. Many of the fisher folk expressed no interest in the western education but are more interested in sending their children to Quranic School within and outside the study area. The low level of western education may affect the knowledge of HIV/AIDS increasing the ignorance of the people on HIV/AIDS and also limits the job opportunities available to the people restricting to intra occupational activities. It is evident that education levels need to be improved among the fisher folk.

6 Source : fieldwork 2011

Pie chart distribution of educational attainment among the respondents IV.

7 Sexuality Among Fisher Folk

The pie chart depicts the sexual behavioral practices. Only 28.3% of the respondents agreed that they became sexually active between ages between 10 -15 while 42.3% for 16 -20. Majority of the respondents had their first sexual intercourse in that age bracket. These age groups have been identified as the most sexually active group in any society. This means that no matter how low the prevalence of HIV is, once it enters this group, it can spread at geometric rate unless steps are taken to check the rate increase considering the fact that population is always high in areas noted for poverty.

8 Number of Sexual Partners and Cohabitation

Table 5 shows that 34.8% of the respondents had one sexual partner while 53.9% had two or more sexual partners. Only 11.3% said they have never had sexual relations. The reason given by a respondent was that is taboo that anyone as a fisherman who goes into sexual relation outside marriage will be eaten up by a crocodile in the course of his fishing activities. This taboo may be a factor that supports child/early and intergenerational marriages which are very common in fishing communities and depriving especially the women their rights thereby increasing poverty.

38% of the respondents had been living with at least a partner for 1-10 years while 47% for more than 15 years.

42.0% of the respondents had premarital experience while 58.0% said they had no premarital experiences. This may be true considering the early marriage that is a common phenomenon among the fisher folk. 38.5% had between 1 -4 partners. The implication of early marriage which characterizes the area may be the depriving factor for the women unequal rights to resources which may gives rise to unequal power relation and form a recipe for rapid divorce, early sexual activities, HIV/AIDS, early motherhood and vicious cycle of poverty thereby limiting the contribution of the women to agricultural development in the area for improved living condition.

9 Extra Marital Affairs and Push Factors

Table 6 presents information on extra marital affairs and push factors to sexual behavioral practice. Only 7.0% of the respondents said they have had extra marital sex. The little percentage of respondents involved extra marital might have been a contributing factor to HIV/AIDS prevalence because majority are non -condom use respondents thereby exposing them to HIV/AIDS infections in the area. 81.2% claimed that they never did. The push factors to engaging in extra marital relationship found are as follows; only 1.8% of the respondents said for vengeance, while 1.5% said for long separation and meeting an old partner. According to a key informant, this is mostly common among men because of the daily cash income accruable to them while for the women it may be for the biting lack of basic needs and gain of material wealth for their upkeep. This act may reduce human dignity causing a decline in rate of economic and agricultural, deteriorating the living condition of the people and exposing them to opportunistic infection in the area.

10 Knowledge of Condom and Its Availability

Table 7 presents the knowledge of condom and it uses. Majority (84.5%) of the respondents have heard of condom while 15.5% said they had no knowledge of condom. Incredibly, it was observed that few of the respondents said they don't know how it looks like; the fact that there is high level of awareness has not translated to increase in knowledge especially the female condom which even a medical officer admitted she has not seen how much more the fisher folk in the area. 39.8% of the respondents perceived condom to be a commodity for young people only while 33.5% agreed that it promotes sexual misbehavior and immorality in any society. Only 18.4% said it protects against AIDS. 5.0% feel that it reduces the level of pleasure and satisfaction obtained during sexual intercourse which corroborates the findings of Oswatt and Matsen ??1993) in their survey reported that about 8% of their respondents with multiple partners use condom during sexual intercourse while about 90% do not use condom and Strider and Beaman (1989) reported that majority of sexually active persons do not use condom because of the following reasons: Spontaneous sexual response, decreased pleasure for self and partner, they are inconvenient and uncomfortable and decrease feeling.

20.2% of the respondents said condom can be accessed in their community while 79% said it cannot be accessed. Only 6.5% had use condom in the past 12 months. The non availability of condom in some communities may contribute to non-use of condom and additional cost of accessing condom from the nearby town may also discourage apart from the reasons given by the respondents. The religion of the people might have also contributed to the level of acceptance of the contraceptive in the area. Thus, interventions should not only address the issue of commodity availability and access but seriously link the risk exposed to by fisher folk in the midst of unsafe sex practices.

This result is capable of fuelling the spread of sexually transmitted infections, HIV and unwanted pregnancies which may have direct or indirect impact on the living conditions of the fisher folk in the area.

11 Volume XIII Issue II Version I

12 Non Use of Condom

Table 8 presents the respondents non use of condom, 35.3% of the respondents were living with partner while 21.3% said they trust partner. Both formed the major reasons for not using condom, a key informant said that there is high level of promiscuous activities going on around some of the fishing communities.

2.3% of the respondents said that they use condom for some occasional partners in the course eking their livelihood activities. This result support the finding of Thompson et al. (1996) that respondents' perception on the use of condom is that they perceive condom as ineffective, and interfering with pleasure and also support the works of Akande 1994 that majority of sexually active persons do not use condom during intercourse, condom

use was not perceived as necessary in sexual encounters involving a regular partners and Singh, Porterfield, Thilakavathi, Shepard, Mawar, Divekar and Bollinger (1997) and Baggaley et al.

(1997) that respondents who were sexually active do not use condom and some inconsistently use condom with causal partners. There is a high level of knowledge about the condom and its protective role against infections.

IX. Prevalence of Sexually Transmitted Infections in the Fishing Communities

Table 9 presents the most common sexually transmitted diseases known. Majority (76.1%) of the respondents said they know gonorrhea while 5.8% said Syphilis. 31.0% of the respondents associate the symptom of the diseases to burning sensation when urinating while 28.0% claimed they don't know. The low knowledge in STDs may be due to lack of health facilities, and poorly staffed health centres result to misinformation on health -related matters and access to health information is also limited in view of lack of access roads especially during the rainy season. Thus respondents resort to the services of traditional medicine men and visiting of patent medicine store for treatment thereby exposing them to other risky infections. The prevalence of sexually transmitted diseases may be predisposing factors towards HIV infection and behavior patterns is likely to increase risk of infection in line with UNAIDS (1998c).

Hiv/Aids Profile in the Fishing Communities

Table 11 shows HIV/AIDS profile. Majority (82.5%) of the respondents said there are no cases of HIV/AIDS in the communities while 16% said there were cases of HIV/AIDS recorded.

Among the cases recorded, 95% of the respondents said the people affected were both men and women which are young people. The result has serious implications on rural productivity since they fall within the productive group in the society.

Hiv/Aids Record in Fishing Communities

The pie chart shows that 14.0% of the respondents admitted that some cases of HIV/AIDS infection has been around the communities while 84.0% said they don't know. Although many of the respondents said they don't know of cases of HIV/AIDS in the villages. The implication of percentage of cases of HIV/AIDS recorded may diminish household livelihoods and renders more of them vulnerable to future collapse of household assets and reduced capacity to employ sustainable livelihood strategies to escape from poverty as explained by Masanjala (2007). The finding corroborates Bain (1998), Hemrich and Topouzis (2000) that fishing communities are among the most vulnerable occupational groups and in line with Garcia and de Levia Moreno (2003) that it is in these areas that vast majority of the world's 100 fisheries dependent people and work. The inability of the respondents to ascertained status of HIV/AIDS prevalence is not far fetch from stigma on such community from other neighboring communities.

Source: author's work 2011

Pie chart distribution of HIV/AIDS profile in Kainji Lake Basin XII.

Available Incentives on People

Living with Hiv/Aids Table 12 presents the interventions to the people living with HIV/AIDS (PLWHA), only 4.5% of the respondent said that the PLWHA have access to retroviral drug while 14.0% for health care services which are far away from some of the fishing communities. 4.5% of the respondents said rejection/stigmatization, a key informant said that people stylishly avoid victims. Therefore, it is obvious that rejection/stigmatization may still be an obstacle to contend with in the area, a result synonymous to what NPC (2004b) reported that there is high level of HIV/AIDS related stigma and discrimination towards PLWHA in the general population in Nigeria (NPC, 2004b).

58.4% of the respondents said that people with multiple health problems may be suspected to be living with HIV/AIDS in the communities while 28.8% said they don't know except it was confirmed from the hospital. It is observed that many of the fisher folk in the area may have difficulty accessing general health services, let alone treatment for opportunistic infections because of the distance to the designated health centres/hospital. A visit to one of the designated centres within Kainji lake basin gave general record but no reliable quantitative data on the prevalence of HIV/AIDS in fishing communities does exist. It is important to note that in Niger state, one of the States that formed Kainji lake basin presently have about 300,000 people live with the virus thus making the State one of the States with high number of people living with HIV/AIDS(The trumpet, 2011) a local newspaper. With this information one may consider the several people were likely to be HIV positive as against the picture recorded in figure ?? above. These assumptions were based on their The general perception of health official was that people should visit the designated centres for testing. This did not reflect the views of the fisherfolk who felt that little effort was made to get workers to reach them. The inability of health officials to visit may be due to remoteness and concern at the danger of travelling over un-made roads or by boat. This may help explain why little or no support had been provided to assist fisher folk in the area. Figure ?? shows that apart

from sexually transmitted diseases, there are other diseases. Most (95.2%) of the respondents acknowledged that there are other prevalent diseases found in the area. 40.3% of the respondents identified malaria, 39.3% identified diarrhea malaria and cholera as the major diseases. This finding is not surprising for malaria because according to Triumphet (2011) reported that 60% of complaints of ill health in the hospital across Niger State are on malaria and 30% of admissions are malaria related problems. This is in consonance with the statement that the dynamic interaction between malaria and HIV as documented in the medical literature as found in Abu-Raddah, et al 2006; Laufer and Plowe, 2007; Reithinger, et al 2009. Only 1.3% for tuberculosis, although the percent is low but significant because tuberculosis is a disease that could be traced to HIV/AIDS, it is thought that one-third of the increase in tuberculosis incidence is attributable to HIV infection." It was observed that the local patent medicine dealers or the traditional healers are the medical practitioners in many communities in the study area. increase in agriculture/fisheries production in the area. If the situation among fisherfolk in the area is not checked it may be subsumed in the projection of International Labor Organization (ILO) that HIV/AIDS may cause a drop in economic growth by as much as 25% by 2020 in sub-Saharan Africa because of death and illness among workers in their productive years (ILO, 2000). 14 presents the various strategies used to combat the problem of disease outbreak. 66% of the respondents agreed to the sale of non productive asset while 52.8% for sale of productive asset. Since most of the respondents lack alternative livelihood strategies which may require less labor intensive activity, they must resort immediately to selling assets such as boat, land and livestock were insurance to cope with sudden expenditure and for those who may not have disposable assets reported having to sell beds and mattresses to cope with the prevailing situation. Only 28.5% of the respondents agreed that it causes a severe crack in the household.

15.0% and 7.0% of the respondents had taken to theft and prostitution respectively. These findings revealed that social vices are ways out of the ugly situation among fisher folk. This was mentioned during focus group discussion and individual interviews that increasing engagement in illegal activities that using unauthorized fishing gear and theft are found in the study area.

Some key informants reliably informed that there is a decline in levels of income over time due to reduced catches and destruction of illegal gear. This result may imply that the fisher folk may go into healthy and unhealthy means of finding solution to their immediate predicaments which may further create and compound the situation rather than proffering solution to the problems.

18 XVI. Effects of Death on Fishing Communities

Table 15 shows the effects of death. 46.5% of the respondents agreed that it will bring about reduction in the production while 17.5% agreed to the combination of reduction in the production, required paid labor and the role of women changed. This result may have serious implications on agricultural production taking into consideration the role of women that change knowing fully that women are responsible for up to 80% of agricultural production which involves subsistence and cash crops. Therefore, local supply of food stuff may be endangered due to loss of labor for subsistence production in the area. Thus, supporting the assertion of Devereux (2001) that food insecurity may occur because people may not be able access as food as of social and economic factors such as poverty irrespective of food availability. In addition, this may also affect family values, traditional norms and customs which may influence children differently according to their gender. Also, the affected households may be faced with the problem of additional costs of medicines, fees to doctors, traditional healers, and transport to health facilities centres for care of the sick, food insecurity and general decrease in income resulting from loss of labor. This may result to the sale of productive and non productive assets. Consequently it will bring negative impact on food production system, the local economy and the structure of the society in the communities as reported in the views of Barnett and Whiteside (2002) in the paper on AIDS in the twenty-first century.

19 Conclusion

This paper has highlighted the sexuality and HIV/AIDS profile among fisher folk of Kainji Lake Basin of Nigeria. It was discovered that fishing communities generally have low educational attainment. They practice multiple sex relationship and cases of HIV/AIDS were found in among the fisher folk. Little or no attention has been given to the fisher folk and unfortunately fishing communities have not benefited much from lectures, seminars and workshops on HIV/AIDS, it is imperative for government and other community based organizations to give fisheries sector attention on sex education and safe sex practice to reduce vulnerability to HIV/AIDS and human dignity causing a decline in rate of economic and agricultural, deteriorating the living condition of the people and exposing them to opportunistic infection in the area.

However, the following recommendations will assist the fishing communities to fight against health related problems, especially HIV/AIDS; ? Encouraging know your status campaign in the fisheries sector. ? Enlightenment campaigns and education programme on safe sex.



Figure 1:

265 ? Provision of health facilities and health personnel in fishing communities 1 2 3 4 5 6 7 8 9

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1

Age	Frequency	Percent
Less than 15	-	-
15-20	24	6.0
21-25	53	13.3
26-30	70	17.6
31-35	70	17.6
36-40	40	11.2
41-45	44	11.1
More than 45	95	23.1
Sex		
Male	257	64.3
Female	143	35.7
Marital status		
Single	50	11.3
Married	145	37.5
Divorced	1	0.3
Widowed	1	0.3
Married with two wives	165	41.3
Married with three wives	33	8.3
Married with more than three wives	5	1.3
Total	400	100
Source : author's work, 2011		

Figure 2: Table 1 :

2

Number of children	household size Frequency	percent
1-5	194	48.5
6-10	89	22.3
Above 10	60	15.0
None	57	14.3

Figure 3: Table 2 :

3

Ethnic composition	composition and re- ligion	
	Frequency	Percent
Hausa	200	50.0
Bussawa	67	16.8
Lopawa	66	16.5
Kamberi	49	12.3
Urhobo/Ijaw	3	0.8
Yoruba	15	3.8
Religion		
Islam	382	
Christianity	16	95.5
Tradition	2	4.0
		0.5
Total	400	100
Source : author's work, 2011		

Figure 4: Table 3 :

5

Number of partners

Figure 5: Table 5 :

6

Extra marital sex	Frequency	Percent
Yes	28	7.0
No	325	81.2
No answer	47	11.8
Number of partners outside wives		
Between 1 and 4	23	5.7
Between 5 and 9	5	1.5
Over 10	-	-
None	372	92.8
Extramartial sex factors		
Vengeance	7	1.8
Routine	-	-
Long separation	6	1.5
Meeting an old partner	6	1.5
Checking fecundity	1	0.3
Just the need for a change	6	1.5
Need for money	2	0.5
None	372	92.5
Source : author's work 2011		
VII.		

Figure 6: Table 6 :

7

Heard of condom	F	%		
Yes	338	84.5		
No	62	15.5		
Uses of condom				
Contraception	35	8.8		
Prevention of AIDS To avoid STDs Contraceptive, prevention	140	69	35.0	17.3
of AIDS & to avoid STDs	32	8.0		
I don't know	124	31.0		
Perception of use condom				
Promotes sexual misbehavior and immorality	134	33.5		
Protects against AIDS				
Does not protect 100% Reduces pleasure Can cause disease	74	52	18.4	13.0
Something for young people only	20	1	5.0	0.3
	119	39.8		
Access to condom in the village				
Yes	81	20.2		
No I don't know	316	3	79.0	0.8
Ever used condom during sex				
Yes	38	9.4		
Never I can't remember	355	7	88.8	1.8
Condom in the past 12 months				
Yes	26	6.5		
No	374	93.5		
Total	400	100		
Source : author's work 2011				
VIII.				

Figure 7: Table 7 :

8

Condom usage	Frequency	Percent
Contraception	5	1.3
With some occasional partners	9	2.3
With all occasional partners	6	1.5
During all sexual relations	10	2.5
When condom is available	4	1.0
Don't use condom	366	91.5
Reason for not using condom		
Not sold in the village	96	14.1
Difficult to find	2	0.5
Too expensive	1	0.8
Partner refused	8	2.0
Hate condoms	11	2.8
Living with partner	141	35.3
Trust partner	85	21.3
Partner didn't insist	15	3.3
See no point in use it	41	10.3
Total	400	100
Source : author's work 2011		

Figure 8: Table 8 :

9

knowledge of sexually transmitted diseases and
symptoms

Figure 9: Table 9 :

10

across gender

Figure 10: Table 10 :

11

HIV/AIDS profile		
HIV/AIDS Profile	Frequency	Percent
Infected	64	16
Not infected	330	82.5
Don't know	6	1.5
People mostly affected		
Men	9	2.3
Women	24	6.0
Young people	38	9.5
Migrant	3	0.8
Mobile group	10	2.5
I don't know	79	79.0
Total	400	100
Source : author's work 2011		
XI.		

Figure 11: Table 11 :

12

HIV/AIDS infection confirmation		
Actions on PLWHA	Frequency	Percent
Provision of retroviral drugs	19	4.8
Health care services	56	14.0
Investment opportunities	-	-
Stigmatization/Rejection	19	4.8
Combination of provision of retroviral drugs and stigmatization/rejection	2	0.5
I don't know	304	76.0
Confirmation of HIVAID		
By asking the person if he or she has some health problems	234	58.4
By asking him or her if he or she has many sexual partners		
By asking him or her if he or she has ever had sex with prostitutes or those who patronise prostitutes	32	8.0
By asking him or her if he or she have ever had a blood transfusion	16	4.0
I don't know	3	0.8
	115	28.8
Total	400	100
Source : author's work 2011		
XIII. Other Opportunistic Infections in the Fishing Communities		

Figure 12: Table 12 :

13

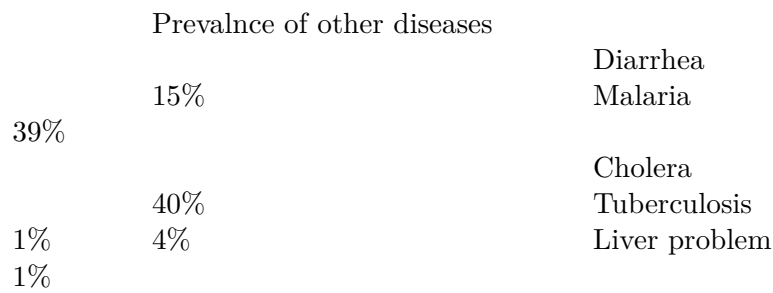


Figure 13: Table 13

13

Effects

Figure 14: Table 13 :

14

Strategy to combat problem of disease	Yes (F)	%	No (F)	%
Increase in mobility	214	53.5	186	46.5
Seek employment as daily laborer	242	60.5	158	39.5
More percentage of the food comes gathering	211	52.8	189	47.5
Sale of non productive asset	264	66.0	136	34.0
Reduction in nutrition(quantity & quality)	217	54.3	183	45.7
Severe debt	234	58.5	166	41.5
Sale of productive assets	211	52.8	188	47.0
Theft	60	15.0	340	85.0
Household dissolves	114	28.5	286	71.5
Prostitution	31	7.8	369	92.2
Total	400	100		

Source : author's work 2011

Figure 15: Table 14 :

15

Effects of death

Figure 16: Table 15 :

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